

AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier.

1. (Withdrawn) A method for obtaining a transformed plant having a modified phenotype relating to a size or the organic acid composition of a storage organ of the plant, comprising the step of:

modifying the expression of a gene encoding an outward potassium channel in one or more cells of the plant wherein the cells are selected from the group consisting of the cells of the storage organ and the cells in the tissues supplying the storage organ.

2. (Withdrawn) The method according to Claim 1, further comprising the steps of:

transforming at least one cell of the plant with the gene encoding the outward potassium channel,

selecting the at least one transformed cell, and

regenerating a transformed plant from the selected transformed cell.

3. (Withdrawn) The method according to Claim 1, wherein the gene whose expression is modified encodes a polypeptide sequence having at least a 40% similarity with a polypeptide sequence deduced from the nucleotide sequence encoding an outward potassium channel derived from *Vitis Vinifera* (VvSOR).

4. (Withdrawn) The method according to Claim 1, wherein the gene is over-expressed.

5. (Cancelled)

6. (Withdrawn) A transformed plant, obtained by the method according to Claim 2.
7. (Withdrawn) A method of selection of a plant having a modified phenotype relating to a size of the storage organs of the said plant and/or organic acid composition, wherein the expression of a gene encoding an outward potassium channel of the plant in the cells of the storage organs or in the tissues supplying the storage organs is measured.
8. (Withdrawn) The method according to Claim 7, wherein the gene whose expression is measured encodes a polypeptide sequence having at least a 40% similarity with a polypeptide sequence deduced from the nucleotide sequence encoding an outward potassium channel derived from *Vitis Vinifera* (VvSOR).
9. (Withdrawn) The method according to Claim 8, wherein a quantity of mRNA derived from a transcription of the gene is measured, or a quantity of proteins resulting from the expression of the gene is measured.
10. (Withdrawn) The method according to Claim 9, wherein the measurement of the quantity of mRNA is carried out during the development of the storage organs, and in that the measurement of the proteins is carried out during or after the development of the storage organs.
11. (Previously Presented) A cell of a plant, wherein the cell over-expresses a gene encoding an outward rectifier potassium passage whose polypeptide sequence has at least a 40% similarity

with a polypeptide sequence deduced from the nucleotide sequence encoding an outward rectifier channel derived from *Vitis Vinifera* (VvSOR).

12. (Currently Amended) A plant, wherein the plant over-expresses a gene encoding an outward rectifier potassium channel of the said plant whose polypeptide sequence has at least a 40% ~~similarity~~ similarity with a polypeptide sequence deduced from the sequence encoding an outward rectifier channel derived from *Vitis Vinifera* (VvSOR).

13.-15. (Cancelled)

16. (Withdrawn) An antibody, wherein the antibody is directed against all or part of a polypeptide derived from the expression of a gene encoding an outward rectifier potassium channel of a plant.

17. (Withdrawn) The antibody according to Claim 16, wherein the gene encodes a polypeptide sequence having at least a 40% similarity with a polypeptide sequence deduced from the sequence encoding an outward rectifier potassium channel derived from *Vitis Vinifera* (VvSOR).

18. (Withdrawn) A method for detecting the presence of all or part of a polypeptide resulting from the expression of a gene encoding an outward rectifier potassium channel of a plant in a sample comprising a mixture of polypeptides, wherein it comprises the following stages:

putting the sample in contact with an antibody according to Claim 16, and
detecting an antigen/antibody complex formed.

19. (Withdrawn) The method according to Claim 18, wherein the gene encodes a polypeptide sequence having at least a 40% similarity with a polypeptide sequence deduced from the sequence encoding an outward rectifier potassium channel derived from *Vitis Vinifera*).

20. (Withdrawn) A kit for detecting all or part of a polypeptide produced from a gene encoding a potassium channel of a plant in a sample containing a mixture of polypeptides, wherein it comprises an antibody according to Claim 16.

21. (Withdrawn) The detection kit according to Claim 20, wherein the gene encodes a polypeptide sequence having at least a 40% similarity with a polypeptide sequence deduced from the sequence encoding an outward rectifier potassium channel derived from *Vitis Vinifera* (VvSOR).